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***Anabahusakala*, a new genus
from the Brazilian Amazon rainforest**

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ABSTRACT — *Anabahusakala amapensis* gen. & sp. nov. is described and illustrated. This fungus is distinguished by differentiated robust dark brown conidiophores that are pale brown to brown and branch irregularly towards the apex. The conidia, which are thallic-arthric, cylindrical, sub-oblong, Y-shaped to irregular, and pale brown to brown, occur in branched chains formed by disarticulation of the conidiophore branches.

KEY WORDS — asexual fungi, systematic, palm tree

Introduction

Several microfungi were collected during a survey of saprophytic conidial fungi on dead palm leaves in Brazil's Amapá National Forest Reserve. Among these samples an interesting arthric-thallic fungus was discovered that represents a new genus and species, which are described and illustrated herein.

The samples were examined in the laboratory using a stereomicroscope and mounted in lacto-glycerol for study under a light microscope. Specimens are

deposited in the Instituto de Pesquisas Científicas e Tecnológicas do Estado do Amapá (HAMAB).

Taxonomy

Anabahusakala L.T. Carmo, J.S. Monteiro, R.F. Castañeda & Gusmão, **gen. nov.**

MYCOBANK MB805030

Differs from *Bahusakala* by its macronematous, robust, fasciate conidiophores irregularly branched at the apex and its cylindrical to irregular, septate, pigmented conidia formed by disarticulation of the branches.

TYPE SPECIES: *Anabahusakala amapensis* L.T. Carmo et al.

ETYMOLOGY: Greek, *Ana*-, meaning upwards, back, again; *-bahusakala*, referring to the hyphomycete genus *Bahusakala*.

Asexual fungi. CONIDIOPHORES macronematous, mononematous, branched, septate, pigmented. CONIDIOGENOUS HYPHAE holothallic, pigmented; conidial secession schizolytic. CONIDIA catenulate, septate, pigmented, formed by disarticulation of the conidiogenous hyphae.

Anabahusakala amapensis L.T. Carmo, J.S. Monteiro, Gusmão & R.F. Castañeda, **sp. nov.**

PLATE 1, 2

MYCOBANK MB805045

Differs from *Bahusakala* species by its macronematous, robust, fasciate conidiophores with irregular apical branches and its cylindrical to irregular, septate, pigmented conidia, formed by disarticulation of the branches.

TYPE: Brazil, Amapá State, Amapá National Forest Reserve, Parcel "Leste Oeste" 1; 0°57' N 51°36' W, on decaying leaves of *Syagrus* sp. (*Arecaceae*), 11.VII.2009, coll. J.S. Monteiro & H. Sotão (**Holotype**: HAMAB 18706).

ETYMOLOGY: *amapensis*, referring to the type location, Amapá State.

COLONIES on the natural substrate effuse, epiphyllous, hairy, pale brown to brown. Mycelium mostly superficial, composed of branched, septate, smooth hyphae, pale brown, 1–2 µm diam. CONIDIOPHORES macronematous, mononematous, robust, erect, straight, branched towards the apex, 3–9-septate, brown, reddish brown to black, but pale brown fasciate near the septa, smooth, 25–215 × 4–5 µm. CONIDIOGENOUS HYPHAE holothallic, integrated or discrete, determinate, brown to pale brown. Conidial secession schizolytic. CONIDIA cylindrical, Y-shaped, sub-oblong, truncated at the ends, sometimes rounded at the apex, catenulate, 1–2-septate, 7–12 × 2 µm, pale brown to brown, dry, smooth, forming by disarticulation of the apical and lateral branches of the conidiogenous hyphae.

ADDITIONAL SPECIMEN EXAMINED: **BRAZIL**, **AMAPÁ**, Amapá National Forest Reserve, Parcel "Leste Oeste" 1; 0°58' N 51°37' W, on decaying leaves of *Astrocaryum gynacanthum* Mart. (*Arecaceae*), 20.II.2008, coll. J.S. Monteiro (HAMAB 18709).

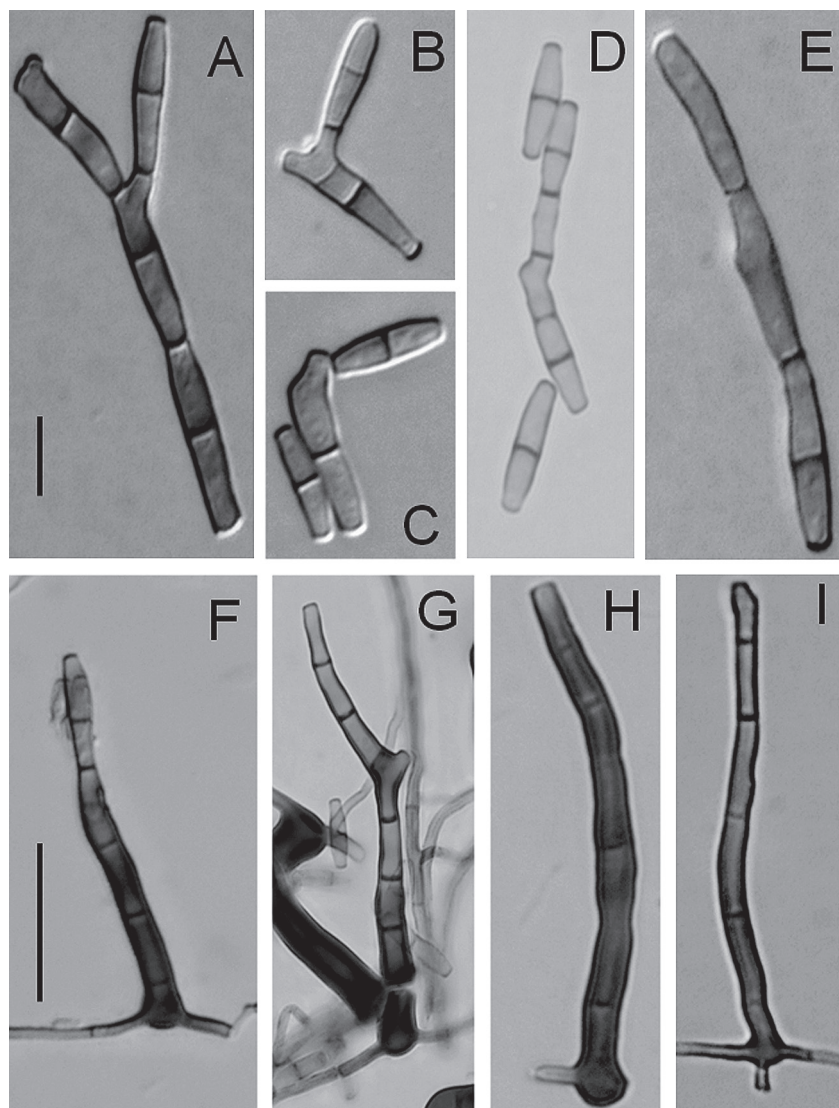


FIG. 1. *Anabahusakala amapensis* (ex HAMAB 18709). A–E. Conidia and ramoconidia. F–I. Conidiophores after disarticulation. Scale bars: A–E = 5 μ m; F–I = 10 μ m.

NOTE: *Bahusakala* (Castañeda-Ruiz et al. 1996, Ellis 1971, Guarro et al. 1980, Subramanian 1958), typified by *B. olivaceonigra* (Berk. & Broome) Subram., produces micronematous to semi-macronematous, decumbent or prostrate

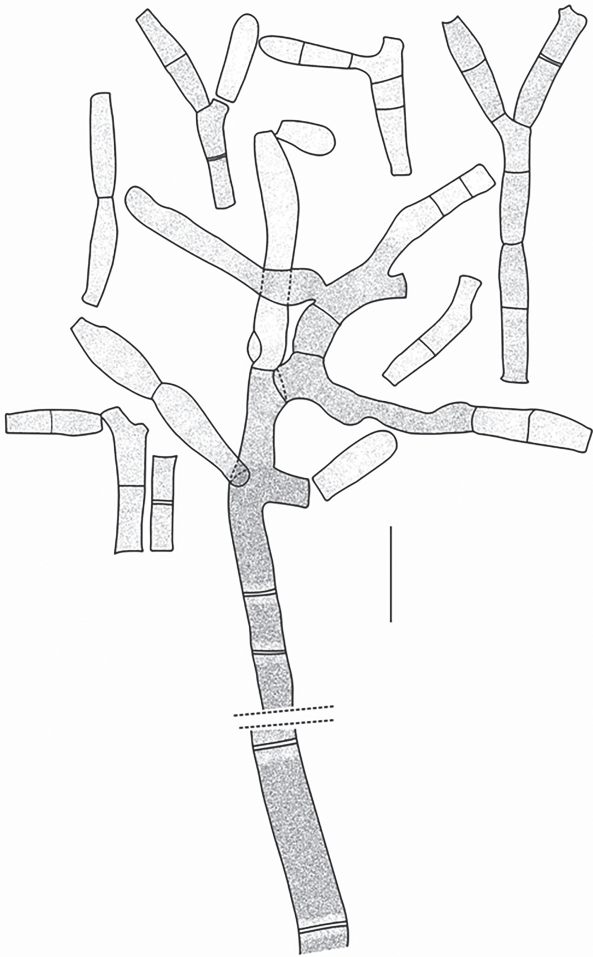


FIG. 2. *Anabahusakala amapensis* (ex HAMAB 18709).
Conidiophore, ramoconidia, and conidia. Scale bar = 10 μm .

conidiophores that form pulverous or pulvinate colonies. The *Bahusakala* thallic-conidia form when the fertile hyphae and main conidiophore axes disarticulate randomly, while in *Anabahusakala* only the apical branches, and not the main conidiophore axes, disarticulate. Of the other genera illustrated by Seifert et al. (2011) that restrict thallic-arthric conidial development to the apical branches, only *Oidiodendron* Robak superficially resembles *Anabahusakala*, and it is distinguished by the production of unicellular, rhexolytic seceding conidia that form branched chains with connectives.

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